

**NOTES ON THE DISTRIBUTION OF *OROBANCHE RAMOSA* L. AND
OROBANCHE UNIFLORA L. (OROBANCHACEAE) IN TEXAS**

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ABSTRACT

The distribution of *Orobanche ramosa* L. and *O. uniflora* L. (Orobanchaceae) in Texas is discussed and mapped.

KEY WORDS: *Orobanche*, Orobanchaceae, Texas, biogeography

Orobanche ramosa L., branched broomrape, is a succulent herb with a yellowish, slender, usually branched stem, approximately 3-15 cm high. Three bracts normally subtend each flower, with the longest one equaling the length of the calyx, which has 4 triangular-ovate, acute, or acuminate teeth. The corolla is 5-9 mm long, has bluish limbs, and a yellowish tube that is slightly constricted above the ovary. The species is commonly parasitic on the roots of tomato, hemp, and tobacco (Britton & Brown 1970).

Orobanche ramosa is a native of southern Europe (Tutin 1964), but has been introduced to the United States, being known from New York and New Jersey to Illinois and Kentucky (Britton & Brown 1970; Fernald 1950) and California (Musselman 1996). The first report of the species in Texas that we have located was by Johnston (1990), which is based upon a specimen that he and K. Nixon collected in Karnes County in 1981. He states that *O. ramosa* is "considered a potentially serious weed pest" and this species has been "the subject of eradication procedures by public agencies." Musselman (1996) mentioned an infestation of *O. ramosa* in Texas discovered in 1982 that was different because the host plants were not crops but roadside weeds. He suggests that the plants were spread by equipment used for

roadside mowing. Jones *et al.* (1997) include *O. ramosa* in their checklist and also remark that it is a "federal noxious weed." The species has been the subject of an eradication effort in Texas (Chandler *et al.* 1990).

Specimens of *Orobanche ramosa* were recently collected in the Blackland Prairies of Limestone County, the Post Oak Savannahs of Freestone County, and the Pineywoods of Walker County (see *exsiccatae* below). In Tutin (1964), the specimens from Limestone and Freestone counties key to *O. ramosa* subsp. *nana* (Reuter) Coutinho, which is distinguished by blue flowers and simple stems. We have not examined the Walker County record. The Texas distribution of this species is depicted in Figure 1.

Specimens cited: TEXAS. Freestone Co.: Donie, corner of Hancock St. and Main St., 8 Apr 1997, *Sammon 51* (BAYLU). Limestone Co.: U.S. Hwy 84 near County Road 120, 3 Apr 1997, *Blackburn 48* (BAYLU,IBE). Walker Co.: Interstate Hwy 45, 1 mi N of intersection with Hwy 30, 5 Mar 1999, *Keith s.n.* (SBSC).

Orobanche uniflora L., one-flowered cancer root or naked broomrape, occurs, according to Correll & Johnston (1970), "In woods and on breaks in isolated localities in e. and w. Tex . . .". Hatch *et al.* (1990) record the occurrence of *O. uniflora* in the Pineywoods, Post Oak Savannahs, Edwards Plateau, High Plains, and Trans-Pecos vegetational regions. We have not located a specimen from the Edwards Plateau, and the High Plains report, which we believe is based on *Correll 23947 & Collins* (LL) from Dickens County, is actually in the Rolling Plains vegetational region. Nesom & Brown (1999) include *O. uniflora* in their checklist of the vascular plants of Walker, Montgomery, and San Jacinto counties, but no voucher specimen is known for any of these three counties. Their report is based upon an unpublished checklist (card file) of the plants of Huntsville State Park, Walker Co., held by the Texas Department of Parks and Wildlife in Austin. The species was collected in the park by Claude A. McLeod, then a professor at Sam Houston State University, and deposited in the herbarium there (SHST). Unfortunately, SHST was totally destroyed by fire in 1978 (*Index Herbariorum*, Pt. 1: *The Herbaria of the World*, 8th ed.).

The following list of *exsiccatae* documents the known distribution for *Orobanche uniflora* in Texas. The *Truit 87* specimen from Hunt County is notable because it is the first report of the species, which is not included by Diggs *et al.* (1999), in the Blackland Prairies. Additionally, *Gaylord s.n.* from Nacogdoches County, a photographic record, is the easternmost point in the distribution of the species within the state of Texas. Figure 1 presents the distribution of this species in Texas.

Specimens examined: TEXAS. Anderson Co.: 2.3 mi NW of Palestine, 8 Apr 1951, *Shinners 12972* (BRIT). Dickens Co.: on breaks, 1 mi E of Dickens, 28 Apr 1961, *Correll 23497 & Collins* (LL). Hunt Co.: Commerce, Hwy 50, 60 yd from Loop 178, 12 Apr 1995, *Truit 87* (BAYLU). Jeff Davis Co.: rocky open ground near top of Mt. Livermore, 2200 m in Davis Mtns, 14 Jun 1926, *Palmer 30875* (TEX). Nacogdoches Co.: Carizzo Springs branch, Carizzo Springs Drive, 2.8 mi E of Nacogdoches on FM 1878, Mar 1986, *Gaylord s.n.* (BAYLU-photo). Van Zandt Co.: w/o location, May 1930, Thelma Peckham Board School, *leg. ign.* (TEX): 10 mi E of Wills Point, 3 mi E of Edgewood, 16 Apr 1950, *Shinners 12202* (BRIT).

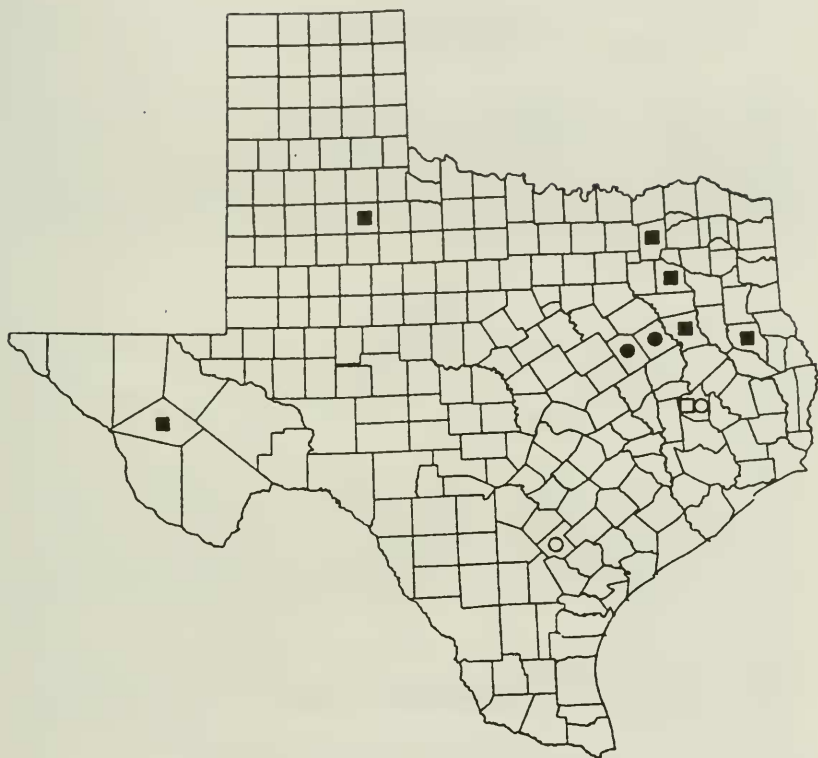


Fig. 1. Distribution of *Orobanche ramosa* (circles) and *O. uniflora* (squares) in Texas. Hollow figures represent reports not seen by the authors (see text).

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